

Millions of minds think math is confusing. In 1983 I asked why.



Jonathan J. Crabtree Math Historian

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It's said the two most important days in your life are the day you're born and the day you find out why. I was born April 24 1961. I found out why at age 7.

For thousands of years it was a 'fact' that all swans were white. Yet this fact became fiction with the discovery of black swans in Australia. Such 'Black Swan' events are rare. Yet, after they happen, many say they could have been predicted. Examples include Britain leaving the European Union, the election of Donald Trump, 9/11, the sinking of the Titanic, and so on.

Probably the last place you would ever expect to detect the rumblings of a Black Swan event would be your Grade 2 classroom. Yet, that's where I first noticed zero was missing from my teacher's math explanation.



The author, Jonathan J Crabtree at age 7, front row second from your left.

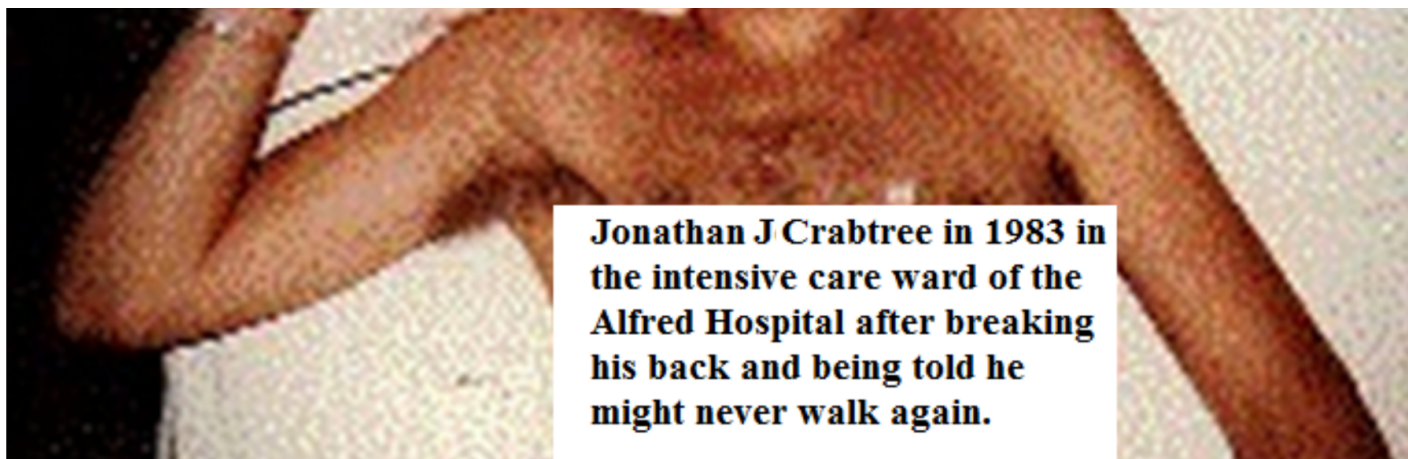
So, the millions of minds giving elementary math explanations the thumbs down over centuries were right! You see, the foundations of math went astray in the Arabic world of the 9th Century and again in 16th Century Europe. Fast-forward to today and I've just concluded a six-state lecture tour of India. The research I presented revealed ample evidence that the Medieval Arabic world and thus, Renaissance Europe, never understood India's zero. If you think your math class was crowded, how about 550 students, plus staff, all learning how integer arithmetic works for the first time!



The author relaxing after a mathematics lesson with 550 students in India.

Of course, I didn't know any of this at lunchtime Friday the 18th of March 1983. All I knew was if I moved I might never walk again. Hours before I'd bounced off the side of a truck making an illegal turn. The truck was fine but at age 21, I was left with a shattered spine. So, having been confused by many math explanations over the years, I made an emergency room deal with God; *"Let me walk again and I'll fix mathematics!"*





Jonathan J Crabtree made a promise to God at age 21. If he could walk again he'd fix mathematics.

I have no formal qualifications in mathematics, yet the reason many people assume I'm a professor is simple. I write papers in the same academic style of a professor and the ideas I submit often go through a process called double blind peer review. That means I don't know who reviews my work and they don't know who wrote it. So, having a Ph.D. doesn't matter so much in my situation as having original ideas and presenting evidence!

Eventually people I was writing to with questions said I start publishing my work. So, with a small measure of confidence, I set out on a rigorous examination of what I noticed at age 7. However, I was paranoid about being called a crank or a crackpot. Eventually after research involving: Arabic, Latin, Ancient Greek, Sanskrit, Hebrew, French, German, Italian and about a dozen other languages, (linked) **I was published**. I'd proven what I'd noticed at age 7. The western definition of multiplication, which heavily influenced mathematics scholars, historians and teachers had been wrong since 1570!

THE LOST LOGIC OF ELEMENTARY MATHEMATICS AND THE HABERDASHER WHO KIDNAPPED KAIZEN

Jonathan Crabtree

www.bit.ly/LostLogicOfMath

www.jonathancrabtree.com | *Mathematics Historian*

Euclid's multiplication definition from Elements, (c. 300 BCE), continues to shape mathematics education today. Yet, upon translation into English in 1570 a 'bug' was created that slowly evolved into a 'virus'. Input two numbers into Euclid's step-by-step definition and it outputs an error. Our multiplication definition, thought to be Euclid's, is in fact that of London haberdasher, Henry Billingsley who in effect kidnapped kaizen, the process of continuous improvement. With our centuries-old multiplication definition revealed to be false, further curricular and pedagogical

research will be required. In accordance with the Scientific Method, the Elements of Western mathematics education must now be rebuilt upon firmer foundations.

This paper proved the definition of multiplication, attributed to Euclid since 1570, was actually the illogical invention of a London haberdasher called Henry Billingsley.

In 2017 I presented a (linked) **fun paper on the history of mathematics** written as a four-act comedy, complete with sheet music! It was there that I was invited to lecture in India, the birthplace of zero and modern mathematics.

So, now I'm becoming a minor c-grade celebrity teaching Indian professors how India's mathematics is meant to work. It might take a few more years before others catch on to my research, yet if you're curious you will find links to slideshow presentations and videos my (linked) **online petition calling for a return to the original simpler scientific zero-based maths of India.**

My final words of wisdom? Discovery is addictive and never underestimate the power of a promise!

Jonathan J Crabtree

Elementary Mathematics Historian / Guest Speaker